a shaft fixed concentrically to said magnet, said shaft including a first portion fitted in said through hole, said first portion having an axial interengagement length from one of said opposite open ends that is in engagement with an inside surface of said through hole and is shorter than an axial length of said through hole and a second portion that is not in engagement with an inside surface of said through hole; and

reinforcing means provided at least inside said through hole for securely fixing said shaft in a predetermined position in said magnet.

23. (Twice Amended) A method of producing a rotor for an electric motor, comprising the steps of:

forming a coating on at least an inside surface of a through hole of an annular magnet material having a rotation axis, said through hole having opposite open ends and extending coaxially with said rotation axis;

providing a shaft including a first portion capable of being fitted in said through hole; and

inserting said first portion of said shaft into said through hole of said magnet until an axial interengagement length of said first portion from one of said opposite open ends, shorter than an axial length of said through hole, is engaged in a tightly press-fit manner with said coating while a second portion of said shaft is not in engagement with said coating.

26. (Amended) A method of producing a rotor for an electric motor, comprising the steps of:

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providing a magnet having a rotation axis and a through hole with opposite open ends extending coaxially with said rotation axis;

providing a shaft including a first portion capable of being fitted in said through hole and a second portion axially adjacent to said first portion for defining a clearance inside said through hole;

inserting said shaft into said through hole of said magnet and fitting said first portion of said shaft in said through hole, until an axial interengagement length of said first portion from one of the opposite ends of the through hole, shorter than an axial length of said through hole, is obtained; and

filling an adhesive in said clearance inside said through hole.

29. (New) A rotor for an electric motor, comprising:

a magnet having a rotation axis, said magnet being provided with a through hole extending coaxially with said rotation axis;

a shaft fixed concentrically to said magnet, said shaft including a first portion fitted in said through hole, said first portion having an axial interengagement length that is in engagement with an inside surface of said through hole and is shorter than an axial length of said through hole and a second portion that is not in engagement with an inside surface of said through hole; and

reinforcing means provided at least inside said through hole for securely fixing said shaft in a predetermined position in said magnet;

said magnet comprising an annular bonded magnet material and said reinforcing means comprising a metal plating formed at least on an inside surface of the

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through hole of said magnet material, and said axial interengagement length of said first portion of said shaft being engaged with said coating in a face-to-face manner;

wherein a dimensional relationship between said axial interengagement length of said first portion of said shaft and said axial length of said through hole is defined as $T/5 \leq t \leq T/2$, in which "T" is said through hole axial length and "t" is said axial interengagement length.

30. (New) A rotor for an electric motor, comprising:

a magnet having a rotation axis, said magnet being provided with a through hole extending coaxially with said rotation axis;

a shaft fixed concentrically to said magnet, said shaft including a first portion fitted in said through hole, said first portion having an axial interengagement length that is in engagement with an inside surface of said through hole and is shorter than an axial length of said through hole and a second portion that is not in engagement with an inside surface of said through hole; and

reinforcing means provided at least inside said through hole for securely fixing said shaft in a predetermined position in said magnet;

said magnet comprising an annular bonded magnet material and said reinforcing means comprising a metal plating formed at least on an inside surface of the through hole of said magnet material, and said axial interengagement length of said first portion of said shaft being engaged with said coating in a face-to-face manner;

wherein said first portion of said shaft is tightly press-fitted in said through hole of said magnet, and wherein an interference of said first portion in said through hole is in a range of 5 μm to 30 μm.

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31. (New) A rotor for an electric motor, comprising:

a magnet having a rotation axis, said magnet being provided with a through hole extending coaxially with said rotation axis;

a shaft fixed concentrically to said magnet, said shaft including a first portion fitted in said through hole, said first portion having an axial interengagement length that is in engagement with an inside surface of said through hole and is shorter than an axial length of said through hole and a second portion that is not in engagement with an inside surface of said through hole; and

reinforcing means provided at least inside said through hole for securely fixing said shaft in a predetermined position in said magnet;

wherein said reinforcing means comprises an adhesive filled in a clearance defined between said second portion of said shaft and an inside surface of said through hole of said magnet, and

wherein a dimensional relationship between said axial interengagement length of said first portion of said shaft and said axial length of said through hole is defined as $T/5 \leq t \leq 4T/5$, in which "T" is said through hole axial length and "t" is said axial interengagement length.

REMARKS

Claims 12, 13, and 16 are canceled and rewritten in independent form as new claims 29-31. Thus, claims 1-11, 14, 15, and 17-31 remain in the application.

In the final Office Action, the Examiner indicated that claims 12, 13, and 16 would be allowable if rewritten in independent form to include the recitations of the respective base and intermediate claims upon which they depended. The rewriting of claims 12, 13, and 16 as new claims 29-31, respectively, should make the new claims allowable.

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